

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A system comprising:
 - a non-volatile data storage device, configured as one or more storage regions, to store one or more bytes of CMOS BIOS data, wherein the device lacks hardware security such that some of the CMOS BIOS regions are modifiable by an application program on the system;
 - another non-volatile data storage device to store a mirror image of the CMOS BIOS data;
 - ~~a program store communicatively coupled to the non-volatile data storage device, the program store to store one or more processor-readable instructions to ascertain the validity of the CMOS BIOS data stored in the non-volatile storage device and if invalid to replace the CMOS BIOS data in the non-volatile storage device with an earlier stored valid~~the mirror image of the data; and
 - a processing unit coupled to the non-volatile data storage device and program store, to read and process the one or more instructions in the program store.
2. (Previously Presented) The system of claim 1 wherein the processing unit is configured to process the instructions in the program store as part of a start-up procedure.
3. (Currently Amended) The system of claim 1 wherein the ~~data stored in the non-volatile data storage device is a Basic Input Output System (BIOS)~~program store is inside said another non-volatile data storage device.
4. (Original) The system of claim 1 wherein the processor-readable instructions in the program store ascertain the validity of the data stored in the non-volatile storage device on a region by region basis.
5. (Currently Amended) The system of claim 1 wherein the ~~earlier stored valid~~ image of the CMOS BIOS data is stored in a location that cannot be modified without system authorization.

6. (Currently Amended) The system of claim 5 wherein system authorization includes
employing a system interface to perform modifications to the data stored in ~~the~~
said another non-volatile data storage device.
7. (Currently Amended) The system of claim 1 wherein ascertaining the validity of
the CMOS BIOS data stored in the non-volatile storage device includes
determining if the current data in the non-volatile storage device is different than
the ~~earlier-stored valid~~ image of the data.
8. (Currently Amended) The system of claim 1 wherein ascertaining the validity of
the CMOS BIOS data stored in the non-volatile storage device includes
determining if an integrity metric corresponding to the current data in the non-
volatile storage device is different than the same integrity metric corresponding to the
~~earlier-stored valid~~ image of the data.
9. (Original) The system of claim 1 further comprising:
generating a copy the current data in the non-volatile storage device if an
authorized application modifies the current data; and
storing the copy as a valid image of the current data.
10. (Currently Amended) A method comprising:
reading current CMOS BIOS content stored in a non-volatile storage device of a
system, wherein the device lacks hardware security such that the CMOS BIOS content is
modifiable by an application program in the system;
reading from a valid image of the CMOS BIOS content, that is stored in a further
non-volatile storage device;
determining if the current content has been modified without authorization; and
replacing the current content with a ~~previously~~said stored valid image of the
content if the current content is determined to have been modified without
authorization.
11. (Currently Amended) The method of claim 10 ~~further comprising~~wherein the
determining comprises:
reading the valid image of the ~~previously-stored~~CMOS BIOS content; and

comparing the ~~previously stored content~~read valid image to the current content to determine if the current content has been modified.

12. (Currently Amended) The method of claim 10 wherein determining if the current content has been modified without authorization includes

comparing a previously stored checksum, corresponding to the valid image of the ~~previously stored content~~, and the checksum corresponding to the current content.

13. (Currently Amended) The method of claim 10 wherein determining if the current content has been modified without authorization includes

comparing a previously stored cyclic redundancy check value, corresponding to the valid image of the ~~previously stored content~~, and the cyclic redundancy check value corresponding to the current content.

14. (Currently Amended) The method of claim 10 wherein determining if the current content has been modified without authorization includes

comparing a previously stored bit mask, corresponding to the valid image of ~~previously stored~~the content, and ~~the a~~a bit mask corresponding to the current content.

15. (Original) The method of claim 10 further comprising:

storing a valid image of the current content for later use.

16. (Original) The method of claim 10 wherein the content is read from the non-volatile storage device as part of a start-up procedure.

17. (Currently Amended) A method comprising:

arranging a non-volatile storage device of a computer system into one or more storage regions to store CMOS BIOS data, wherein the device lacks hardware security such that some of the CMOS BIOS regions are modifiable by an application program in the system;

generating an integrity metric corresponding to valid CMOS BIOS content stored in a first region of the non-volatile storage device; and

storing the integrity metric in another non-volatile storage device of the computer system to later determine if the content in the first region has been modified without authorization.

18. (Original) The method of claim 17 further comprising:
comparing a previously stored integrity metric, corresponding to an earlier version of the content stored in the first region, to a newly calculated integrity metric corresponding to the current content stored in the first region to determine if an unauthorized modification has occurred.
19. (Original) The method of claim 17 further comprising:
replacing the first region with an earlier version of the content therein if it is determined that there was an unauthorized modification.
20. (Currently Amended) A method comprising:
arranging a non-volatile storage device of a computer system into one or more storage regions to store CMOS BIOS data, wherein the device lacks hardware security such that some of the CMOS BIOS regions are modifiable by an application program in the system; and
comparing current content in a first region to an earlier stored image of the content in the first region, wherein the earlier stored image is in a further non-volatile storage device; and
replacing the current content stored in the first region with the ~~previously-earlier~~ stored content of the first region image if it is determined that there was an unauthorized modification of the current content.
21. (Currently Amended) The method of claim 20 wherein the method is implemented as part of a start-up procedure in the computer system.
22. (Previously Presented) The method of claim 20 wherein the non-volatile storage device is arranged into one or more logical regions, each region having one or more bytes.

Claims 23-25 (Canceled).

26. (Currently Amended) A machine-readable medium having one or more instructions for protecting CMOS BIOS content in a non-volatile storage device of a system against unauthorized ~~use~~ modification in the system, which when executed by a processor, causes the processor to perform operations comprising:

reading current CMOS BIOS content stored in a ~~the~~ non-volatile storage device;
determining if the read current content has been modified without authorization;
and

replacing the current content with a previously stored image of the content from
a flash memory of the system, if the current content is determined to have been
modified without authorization.

27. (Currently Amended) The machine-readable medium of claim 26 wherein
determining if the current content has been modified without authorization includes
reading ~~an image of the~~ previously stored image of the CMOS BIOS content from
another non-volatile storage device of the system; and
comparing the previously stored ~~content~~ image to the current content to
determine if the current content has been modified.

28. (Original) The machine-readable medium of claim 26 wherein determining if the
current content has been modified without authorization includes
comparing a previously stored checksum corresponding to a valid image of
previously stored content and the checksum corresponding to the current content.

29. (Original) The machine-readable medium of claim 26 wherein determining if the
current content has been modified without authorization includes
comparing a previously stored cyclic redundancy check value corresponding to a
valid image of previously stored content and the cyclic redundancy check value
corresponding to the current content.

30. (Previously Presented) The machine-readable medium of claim 26 wherein
determining if the current content has been modified without authorization includes
comparing a previously stored bit mask corresponding to a valid image of
previously stored content and the bit mask corresponding to the current content.